

CLAIMS

1. A wireless communication apparatus comprising:

5 a measuring section that measures a reception quality of each of a plurality of sub-carriers within a communication band from a received signal;

a selecting section that selects a sub-carrier satisfying a predetermined condition relating to a measured reception quality from the plurality of sub-carriers; and

10 a reporting section that gives a reporting of a selection result of the selecting section.

2. The wireless communication apparatus according to claim 1, further comprising an acquisition section that
15 acquires information indicating designation from a higher-level station apparatus, wherein the selecting section selects a sub-carriers satisfying the predetermined condition in accordance with information indicating the designation.

20

3. The wireless communication apparatus according to claim 2, wherein the reporting section transmits reception quality information only for a selected sub-carrier to give a reporting of the selection result.

25

4. The wireless communication apparatus according to claim 2, wherein the acquisition section acquires

information indicating a number of sub-carriers to be selected, and the selecting section selects the number of sub-carriers in descending order of measured reception quality.

5

5. The wireless communication apparatus according to claim 2, wherein the acquisition section acquires information indicating a reception quality threshold value, and the selecting section selects sub-carriers
10 with measured reception quality exceeding the threshold value.

6. The wireless communication apparatus according to claim 3, wherein the reporting section transmits
15 reception quality information with a selected sub-carrier or with a sub-carrier having a one-to-one correspondence with the selected sub-carrier.

7. The wireless communication apparatus according to
20 claim 6, further comprising a spreading section that spreads the reception quality information using a specific spreading code for each user, wherein the reporting section transmits spread reception quality information.

25

8.. The wireless communication apparatus according to claim 3, wherein the reporting section transmits

identification information of one bit indicating that the selected sub-carrier satisfies the predetermined condition as the reception quality information.

5 9. The wireless communication apparatus according to claim 3, further comprising an error detection section that carries out error detection on the received signal, wherein the reporting section transmits a signal indicating a result of error detection as the reception
10 quality information.

10. The wireless communication apparatus according to claim 3, wherein the reporting section transmits a relative value between a value generated based on
15 reception quality of the selected sub-carrier and a predetermined value as the reception quality information.

11. A communication terminal apparatus comprising the wireless communication apparatus according to claim 1.
20

12. A base station apparatus comprising:
a modulating section that modulates packet data using an M-ary number adaptively selected based on a reporting of a selection result where a sub-carrier
25 satisfying a predetermined condition relating to reception quality at an opposing communication apparatus is selected from a plurality of sub-carriers within a

communication band;

an encoding section that encodes the packet data using an encoding rate adaptively selected based on the reporting; and

- 5 a scheduling section that identifies a sub-carrier satisfying the predetermined condition based on the reporting, and carries out scheduling so that packet data of a higher M-ary number or encoding rate to an identified sub-carrier having superior reception quality.

10

13. A reception quality reporting method comprising:

a measuring step of measuring reception quality of a plurality of sub-carriers within a communication band from a received signal every sub-carrier;

- 15 a selection step of selecting a sub-carrier satisfying a predetermined condition relating to measured reception quality from the plurality of sub-carriers; and

20 a reporting step of giving a reporting of a selection result of the selection step.